



Fire Protection Training

Procedures Handbook 4300

PUMPING

TOPIC/EQUIPMENT:	PUMP FROM HYDRANT, CAL FIRE HYDROSTAT ENGINE MODEL #14, OR #15
CATEGORY:	Performance Examination
POINTS POSSIBLE:	100
TIME ALLOWED:	3 minutes and 45 seconds
BEHAVIORAL OBJECTIVE:	

Condition: Given a CAL FIRE hydrostat engine Model #14 or #15 with a full tank of water, a predetermined engine pressure of 150 PSI and the following items and conditions: Tank suction valve open, tank fill valve closed, suction inlet valve closed, 100 feet of 1-½" or 1-¾" hose with nozzle attached laying on the ground, A 20 foot section of 2-½" soft suction hose, a hydrant adapter, a spanner wrench and a hydrant wrench.

Behavior: The student will: Spot the engine at the hydrant, set the spring brake, chock the engine in accord with CAL FIRE policy, engage the pump, connect the discharge hose to a 1-½" discharge outlet, apply an uninterrupted stream of water to a simulated fire, and change over from using the tank as a water source to using the hydrant as a water source. After completing this evolution the student will then return the apparatus to its original response ready condition.

Standard: Following steps and procedures, in proper sequence according to the attached score sheet, with a minimum 80% accuracy within 3 minutes 45 seconds.



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MATERIALS NEEDED:

- One (1) CAL FIRE Model #14 or #15 hydrostat engine
- One (1) Length 1-½" hose or;
- Two (2) Lengths 1-¾" hose
- One (1) 1-½" combination nozzle with shut-off
- One (1) Section 2-½" soft suction hose
- One (1) Hydrant wrench
- One (1) Hydrant adapter
- One (1) Spanner wrench
- One (1) Stopwatch
- One (1) Performance exam per student
- Two (2) Red pens for scoring
- One (1) Clipboard
- Full structure fire safety PPE per operator

PROCEDURES:

The examination will begin when the student either verbally or by conduct performs any step of the examination. The examination will end when the student either verbally or by conduct indicates the examination has been completed. At this time the evaluator will check to see that the engine pressure is properly set and that valves and controls are in the proper position.

SCORING:

Points will be deducted for each step omitted, performed improperly or performed out of sequence. Lettered procedures may be performed in any sequence within the numbered step without a loss of points. Steps designated by Pass/Fail must be performed or the student fails the examination. A score of zero (0) will be given if during the examination the student performs any step or procedure that would jeopardize the safety of personnel or the equipment (i.e., pump engaged before chocks are set, no fire stream produced, tank suction valve closed before hydrant is turned on, and/or suction inlet valve opened, transmission left in gear, relief valve not set, etc.)



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SPECIAL NOTES:

Before the examination begins the student will be allowed to ask any clarifying questions and inspect the equipment. Once the examination begins the evaluator shall not answer any questions or intercede in any way unless safety violations occur that would injure personnel or damage equipment. The engine will be equipped with a 20' length of 2-½" soft suction hose, a hydrant wrench, hydrant adapter, and a spanner wrench. The examination will begin when the student, in full structure fire safety clothing, with the door closed and seat belt on, spots the engine at the hydrant and sets the spring brake.

Score Sheet

PUMP FROM HYDRANT – CAL FIRE
HYDROSTAT ENGINE
MODEL #14, OR #15

DATE ____/____/____ TEST #____ RETEST #____ UNIT #____

STUDENT'S NAME _____

EVALUATOR'S NAME _____

STEPS AND PROCEDURES

POINTS

1. Spot engine at hydrant	Pass/Fail
2. Shift transmission to neutral	Pass/Fail
3. Set spring brake	Pass/Fail
TIME STARTS	
4. Set chock blocks in accord with CAL FIRE policy	Pass/Fail
5. Put tank suction valve switch in OPEN position	Pass/Fail
6. Return to cab and place foot on service brake	5
7. Set transfer valve in proper position	10
8. Adjust throttle to indicate 2000 RPM (+/- 200 RPM) on tachometer	Pass/Fail
9. Engage hydrostatic pump control lever until 100 psi (+/- 20 psi) is registered on pump pressure gauge	Pass/Fail
10. Return to pump panel and connect discharge hose	Pass/Fail
11. Loudly state "Water Coming"	5
12. Slowly open discharge valve	5
13. Return to cab and place foot on service brake	5
14. Adjust pump lever indicating 150 psi (+/- 20 psi) on pump pressure gauge	10
15. Turn pilot valve switch to the "ON" position	Pass/Fail

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Score Sheet

PUMP FROM HYDRANT – CAL FIRE
HYDROSTAT ENGINE
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16. Set relief valve (PRV) at 150 PSI (+/- 20 PSI)	Pass/Fail
17. Remove appliances and flush hydrant	
a. Remove soft suction hose, hydrant adapter, hydrant wrench and spanner wrench from engine	Pass/Fail
b. Uncap and flush hydrant	Pass/Fail
c. Unroll soft suction hose	Pass/Fail
18. Connect hydrant adapter	Pass/Fail
19. Connect soft suction hose to the hydrant and to the suction inlet	Pass/Fail
20. Slowly open the hydrant completely	Pass/Fail
21. If necessary, remove kinks from soft suction hose so that an effective fire stream can be maintained.	Pass/Fail
22. Slowly open suction inlet valve completely. (Suction drain or primer may be used to exhaust air from the system.)	Pass/Fail
23. Close tank suction valve completely	Pass/Fail
24. Return to cab and place foot on service brake	5
25. Adjust pump pressure until relief valve closes and pressure gauge indicates 150 PSI (+/- 20 PSI)	Pass/Fail
Student raises hands to indicate completion of timed portion of exam. If student has not produced an effective fire stream, a score of "0" will be given.	
TIME STOPS	ENTER TIME: _____
EXAMINATION CONTINUES BUT IS NOT TIMED	
26. Return to pump panel, loudly state "Shut Down"	5
27. Slowly close discharge valve	5
28. Return to cab and place foot on service brake	5

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Score Sheet

PUMP FROM HYDRANT – CAL FIRE
HYDROSTAT ENGINE
MODEL #14, OR #15

29. Disengage pump	10
30. Adjust throttle until engine returns to idle	5
31. Turn pilot valve off	Pass/Fail
32. Return to pump panel and slowly open tank fill valve, fill tank, then close tank fill valve	5
33. Close hydrant slowly and completely	Pass/Fail
34. Open the tank suction valve	5
35. Close the suction inlet valve	5
36. Disconnect soft suction hose and hydrant adapter from hydrant and suction inlet	5
39. Return engine to response ready position	5

EXAMINATION COMPLETED

Student will drain, roll and replace all hose, return all equipment to the engine, replace all caps, pick up chock blocks and return the engine to the starting point.

ENTER TOTAL TIME:	_____
POINTS POSSIBLE:	100
POINTS DEDUCTED:	_____
FINAL SCORE	_____

COMMENTS:

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